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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,344	09/04/2001	Shiroshi Matsuki	50352-02	9915

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McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER	
WONG, EDNA	
ART UNIT	PAPER NUMBER
1753	

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/944,344	MATSUKI ET AL.	
	Examiner	Art Unit	
	Edna Wong	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) *4-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

This is in response to the Amendment dated April 25, 2005. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

Election/Restrictions

This application contains claims **4-13** are drawn to an invention nonelected with traverse in Paper No. November 10, 2003. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Response to Arguments

Claim Rejections - 35 USC § 112

Claims **1 and 3** have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection of claims 1 and 3 under 35 U.S.C. 112, second paragraph, has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 103

I. Claims **1 and 3** have been rejected under 35 U.S.C. 103(a) as being

unpatentable over **Pasek et al.** (US Patent No. 5,492,681) in combination with **Bartley** (US Patent No. 4,677,234), **Okada et al.** (US Patent No. 6,218,335 B1), **Fernandez et al.** (US Patent No. 5,449,845) and **Gottfried et al.** (US Patent No. 4,659,555).

The rejection of claims 1 and 3 under 35 U.S.C. 103(a) as being unpatentable over Pasek et al. in combination with Bartley, Okada et al., Fernandez et al. and Gottfried et al. is as applied in the Office Action dated January 25, 2005 and incorporated herein. The rejection has been maintained for the following reasons:

Applicants state that Pasek et al. do not teach or disclose a copper carbonate powder having impurities into a heating furnace and heating the basic carbonate powder to a temperature of 250°C to 800°C as required by claim 1.

In response, the rejection is not overcome by pointing out that one reference does not contain a particular limitation when reliance for that teaching is on another reference. *In re Lyons* 150 USPQ 741 (CCPA 1966). Moreover, it is well settled that one cannot show nonobviousness by attacking the references individually where, as here, the rejection is based on a combination of references. *In re Keller* 208 USPQ 871 (CCPA 1981); I*n re Young* 159 USPQ 725 (CCPA 1968).

Applicants state that the Examiner has relied on the prior art disclosed in Pasek et al., and not on the Pasek et al. invention. The Examiner has not explained how the Pasek et al. invention is modified.

In response, the Examiner has shown how the prior art disclosed in Pasek et al. can be modified to arrive at Applicants' invention. The disclosure of reference must be considered for what it fairly teaches one of ordinary skill in the art, pertinence of non-preferred disclosure must be reviewed in such light. *In re Meinhardt* 157 USPQ 270; and MPEP § 2123.

Applicants state that neither Pasek et al. nor Bartley taken alone or in combination, disclose heating basic copper carbonate containing impurities in an atmosphere which is not rendered reductive to carry out thermal decomposition of the basic copper carbonate to produce an easily dissolved copper oxide powder as require in claim 1.

In response, there is no requirement that the motivation to make the combination be expressly articulated in one or more of the references. The teaching, suggestion or inference can be found not only in the references but also from knowledge generally available to one of ordinary skill in the art. *Ashland Oil v. Delta Resins* 227 USPQ 657 (CAFC 1985). The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin* 170 USPQ 209 (CCPA 19710; *In re Rosselet* 146 USPQ 183 (CCPA 1960). References are evaluated by what they collectively suggest to one versed in the art, rather than by their specific disclosures. *In re Simon* 174 USPQ 114 (CCPA 1972); *In re Richman* 165 USPQ 509, 514 (CCPA 1970).

With regards to basic copper carbonate containing impurities, Applicants claim in claim 3 how the basic copper carbonate is obtained. This is the supplied basic copper carbonate having impurities recited in claim 1, line 4. Gottfried et al. disclose a method to obtain basic copper carbonate at least in a similar manner as instantly claimed. There does not appear to be any method limitations set forth in the instant claims to distinguish the instant claims from the prior art. Therefore, it would have been within the skill of the artisan to expect that the basic copper carbonate obtained by Gottfried would have had impurities.

Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

With regards to produce an easily dissolved copper oxide powder, the combination of Pasek et al. and Bartley supports the conclusion that exposing the basic copper carbonate to temperatures ranging from about 200°C to about 500°C under oxidizing conditions for a sufficient time would result in the conversion of the copper carbonate to copper oxide. The basic copper carbonate obtained by Gottfried, used as the basic copper carbonate disclosed by Bartley, would have produce an easily dissolved copper oxide powder when calcinated because Bartley discloses a method to obtain copper oxide powder at least in a similar manner as instantly claimed. There does not appear to be any method limitations set forth in the instant claims to distinguish the instant claims from the prior art. Therefore, it would have been within the

skill of the artisan to expect that the copper oxide powder obtained by Bartley would have been an easily dissolved copper oxide powder.

Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

Applicants state that the teachings of Pasek t al. and Bartley are not directed to reducing impurities such as Cl and S ions found in copper oxide produced from copper carbonate. The teachings of Osaka do not cure the deficiencies of the teachings of Pasek et al. and Bartley, taken alone or in combination.

In response, the Applicant has a different reason for, or advantage resulting from doing what the prior art relied upon has suggested, it is noted that it is well settled that this is not demonstrative of nonobviousness. *In re Kronig* 190 USPQ 425, 428 (CCPA 1976); *In re Linter* 173 USPQ 560 (CCPA 1972); the prior art motivation or advantage may be different than that of Applicants while still supporting a conclusion of obviousness. *In re Wiseman* 201 USPQ 658 (CCPA 1979); *Ex parte Obiaya* 227 USPQ 58 (Bd. of App. 1985) and MPEP § 2144.

Applicants state that Okada et al. do not disclose or suggest heating or even calcinating a basic copper carbonate, let alone a copper carbonate containing impurities as required by claim 1. Bartley does not specifically disclose the apparatus that the

calcination is conducted in. Thus, the calcination would have been conducted in any ordinary calcining apparatus that supports an operation temperature ranging from about 200°C to about 500°C. One suitable calcining apparatus would have been an electric furnace as disclosed by Okada (col. 3, lines 28-34).

Applicants state that the Examiner's findings of "the impurities in the basic copper carbonate powder would have depended upon how the basic copper carbonate powder was manufactured" and also, "as to washing the easily dissolved copper oxide powder with water for reducing the impurities which have been included in the basis copper carbonate powder from the easily dissolved copper oxide powder to provide the copper electroplating material, the impurities which have been included in the basic copper carbonate powder would have been depended upon how the basic copper carbonate powder was manufactured and reducing them from the easily dissolved copper oxide powder to provide the copper electroplating material would have depended upon the application of the easily dissolved copper oxide powder are pure speculation.

In response, Applicants claim in claim 3 how the basic copper carbonate is obtained. This is the supplied basic copper carbonate having impurities recited in claim 1, line 4. Gottfried et al. disclose a method to obtain basic copper carbonate at least in a similar manner as instantly claimed. There does not appear to be any method limitations set forth in the instant claims to distinguish the instant claims from the prior art. Therefore, it would have been within the skill of the artisan to expect that the basic

copper carbonate obtained by Gottfried would have had impurities.

Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

Washing alone does not make the claims patentable because there can be many reasons in the art to wash a copper oxide powder which may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by the Applicants. *In re Linter* 458 F 2d 1013, 173 USPQ 560 (CCPA 1972); *In re Dillon* 919 F 2d 688, 16 USPQ 2d 1897 (Fed. Cir. 1990), *cert. denied*, 500 USPQ 904 (1991); and MPEP § 2144.

For example, the produced easily dissolved copper oxide powder could have been stored and bagged for some time for later use. Then, one having ordinary skill in the art has the skill to wash the powder before using it in an electroplating process.

Applicants state that the Examiner's conclusion of "it is deemed that the basic copper carbonate powder obtained by the process taught by Gottfried is a basic copper carbonate powder *having impurities* because similar processes can reasonably be expected to yield products which inherently have the same properties" is again pure speculation which has not been supported by any evidence.

In response, Applicants claim in claim 3 how the basic copper carbonate is

obtained. This is the supplied basic copper carbonate having impurities recited in claim 1, line 4. Gottfried et al. disclose a method to obtain basic copper carbonate at least in a similar manner as instantly claimed. There does not appear to be any method limitations set forth in the instant claims to distinguish the instant claims from the prior art. Therefore, it would have been within the skill of the artisan to expect that the basic copper carbonate obtained by Gottfried would have had impurities.

Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

Applicants state that Gottfried et al. teach away from the present invention. Gottfried et al. seeks to produce copper carbonate free of impurities. The Examiner has not explained how the copper complex, namely $CuCO_3 \cdot Cu(OH)_2 \cdot xH_2O$ formed by Gottfried et al., would include impurities.

In response, Applicants claim in claim 3 how the basic copper carbonate is obtained. This is the supplied basic copper carbonate having impurities recited in claim 1, line 4. Gottfried et al. disclose a method to obtain basic copper carbonate at least in a similar manner as instantly claimed. There does not appear to be any method limitations set forth in the instant claims to distinguish the instant claims from the prior art. Therefore, it would have been within the skill of the artisan to expect that the basic copper carbonate obtained by Gottfried would have had impurities.

Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

Applicants has not explained how the method disclosed by Gottfried et al. (at col. 2, line 56 to col. 3, line 6) would not have had impurities when Applicants claim a similar method.

Applicants state that Gottfried et al. do not teach removing impurities from copper oxide as required by claim 1.

In response, the rejection is not overcome by pointing out that one reference does not contain a particular limitation when reliance for that teaching is on another reference. *In re Lyons* 150 USPQ 741 (CCPA 1966). Moreover, it is well settled that one cannot show nonobviousness by attacking the references individually where, as here, the rejection is based on a combination of references. *In re Keller* 208 USPQ 871 (CCPA 1981); *In re Young* 159 USPQ 725 (CCPA 1968).

Applicants state that the preamble does give life and meaning to the body of the claim and therefore, should be accorded weight.

In response, even when the preamble is given weight, the language "adapted to be fed as a copper ion supply to a copper plating bath in copper electroplating" is not a method step that contributes to the manufacturing of the copper electroplating material.

This is the intended use of the copper electroplating material.

II. Claims **2 and 3** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Pasek et al.** (US Patent No. 5,492,681) in combination with **Bartley** (US Patent No. 4,677,234), **Fernandez et al.** (US Patent No. 5,449,845) and **Gottfried et al.** (US Patent No. 4,659,555).

The rejection of claims 2 and 3 under 35 U.S.C. 103(a) as being unpatentable over Pasek et al. in combination with Bartley, Fernandez et al. and Gottfried et al. is as applied in the Office Action dated January 25, 2005 and incorporated herein. The rejection has been maintained for the reasons as discussed above.

Applicants' remarks have been fully considered but they are not deemed to be persuasive.

Claims 2 and 3 do not claim "supplying basic copper carbonate having impurities into *a heating furnace*". Thus, any arguments directed to a heating furnace have no bearing in claim 2.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edna Wong
Primary Examiner
Art Unit 1753

EW
May 16, 2005